# MBF 1339

EnecoTech Southwest Inc 6160 Fairmount Avenue • Suite A San Diego. California 92120 (619) 299-0033 • Fax (619) 299-0087



Project 2102-001

February 11, 2004

Mr. Dan Yokoyama County of Orange Health Care Agency Regulatory Health Services, Environmental Health 2008 East Edinger Avenue Santa Ana, CA 92705-4720

RE: Destruction of Four Groundwater Monitoring Wells 1600 East Valencia Drive, Fullerton, CA County of Orange Well Destruction Permit # 04-01-08

Dear Mr. Yokoyama:

EnecoTech Southwest, Inc. (EnecoTech) is pleased to submit this letter report to the County of Orange Health Care Agency, Regulatory Health Services, Environmental Health (County) detailing the destruction of four groundwater monitoring wells located at the subject site at 1600 East Valencia Drive in the City of Fullerton, California (Figure 1). EnecoTech was retained by Ducommun AeroStructures, Inc. (Client) to destroy the monitoring wells.

### **BACKGROUND**

EnecoTech mobilized to the subject site on January 22 and 23, 2004, to destroy four groundwater monitoring wells identified as BP-2, BP-3, BP-4, and BP-8 as indicated on Figure 2. EnecoTech contracted Baja Exploration, a C-57 licensed drilling company, to perform the well destruction. The County approved the well destruction permit on January 9, 2004. A copy of the approved permit is provided in Appendix A. According to the permit, wells BP-2, BP-3, and BP-4 were to be over-drilled using a hollow-stem auger drill rig and filled with grout. Due to overhead obstructions preventing drilling access to BP-8, the County approved BP-8 to be destroyed by pressure-grouting the well. The well box was to be broken out and the casing was to be destroyed to a depth of 5 feet below ground surface (bgs). To accomplish this, Baja Exploration planned to utilize a skip-loader with a five-foot solid flight auger attachment.

### FIELD ACTIVIES

Upon arrival at the site, EnecoTech informed the tenants of the scope of work to be performed and located the four monitoring wells. It had been reported to EnecoTech by the Client that the monitoring wells were constructed of two-inch PVC casing and extended to depths of approximately 70 feet bgs. However, once the well boxes were opened, EnecoTech discovered that the monitoring wells were actually constructed of four-inch PVC casing and extended to depths of approximately 150 feet bgs. EnecoTech contacted the County immediately and requested an alternative method of destruction. The County approved EnecoTech's request to pressure grout all four monitoring wells to a depth of 5 feet bgs and remove the well casings to a depth of 5 feet bgs.



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Prior to initiation of field activities, EnecoTech conducted a site-specific health and safety meeting to address standard safety procedures. A copy of the Health and Safety Plan is included in Appendix B.

On January 22, 2004, all four monitoring wells were pressure-grouted to approximately 2 feet to 5 feet bgs. Grout was mixed in a 55-gallon drum then pumped into the well casings using a treme pipe that extended to the bottom of each well. The grout mixture consisted of two 50-pound bags of well grout per 50 gallons of water. Monitoring wells BP-2, BP-3, BP-4, and BP-8 were destroyed using approximately 350 gallons, 305 gallons, 305 gallons, and 205 gallons of grout, respectively. Baja Exploration then used a CME-75 hollow-stem auger drill rig to over-drill the upper five feet of well casing of BP-2, BP-3, and BP-4 to a depth of 5 feet bgs.

On January 23, 2004, BP-8 was over-drilled to a depth of 5 feet bgs using a skip-loader with a solid flight auger. The well boxes for all four wells were broken out and the destruction of the wells was completed by backfilling the top five feet with medium bentonite chips covered by one foot of concrete. One 55-gallon drum of soil cuttings, generated from over-drilling the upper five feet from each well, was accumulated. The drum was labeled and left onsite until disposal can be arranged by the Client.

If you have any questions regarding this letter report, please contact the undersigned at your convenience at (619) 299-0033.

Sincerely,

EnecoTech Southwest, Inc.

Edward Kontos Senior Staff Scientist John Royal, RG 6757 Associate Geologist

Attachments:

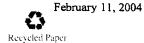
Figures 1 and 2
Appendices A and B

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cc:

Mr. Rob Cowan - Ducommun AeroStructures

Mr. Ben Peralta, Jr., P.E. - City of Fullerton, Engineering Department

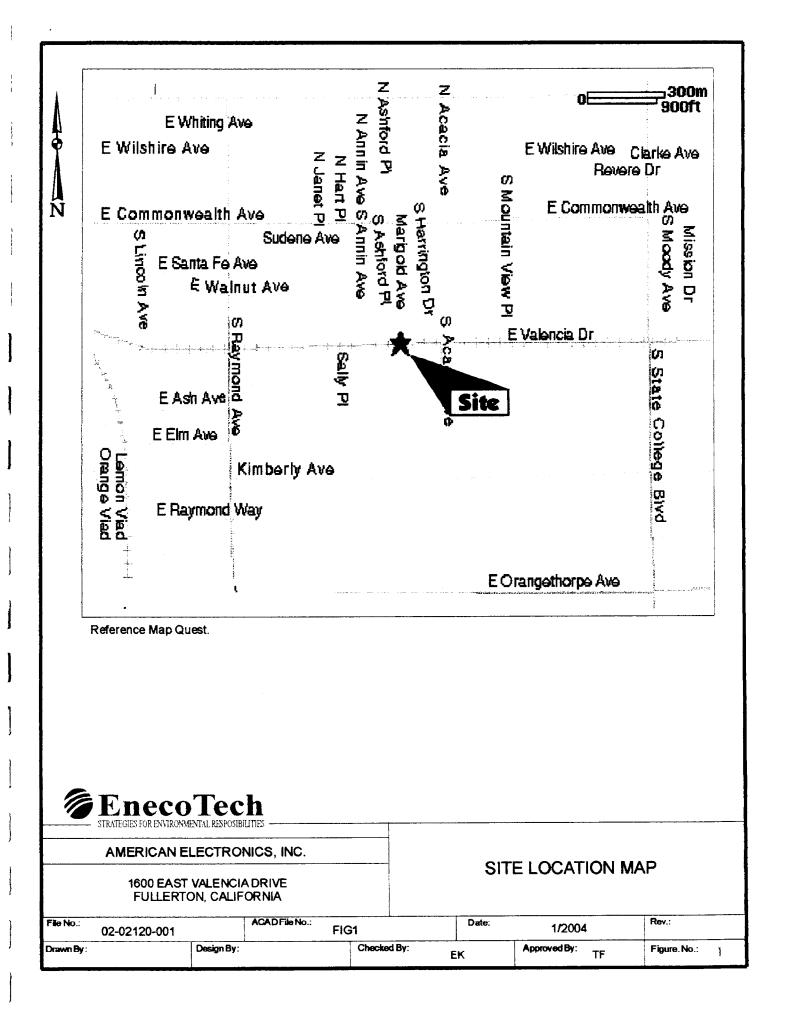


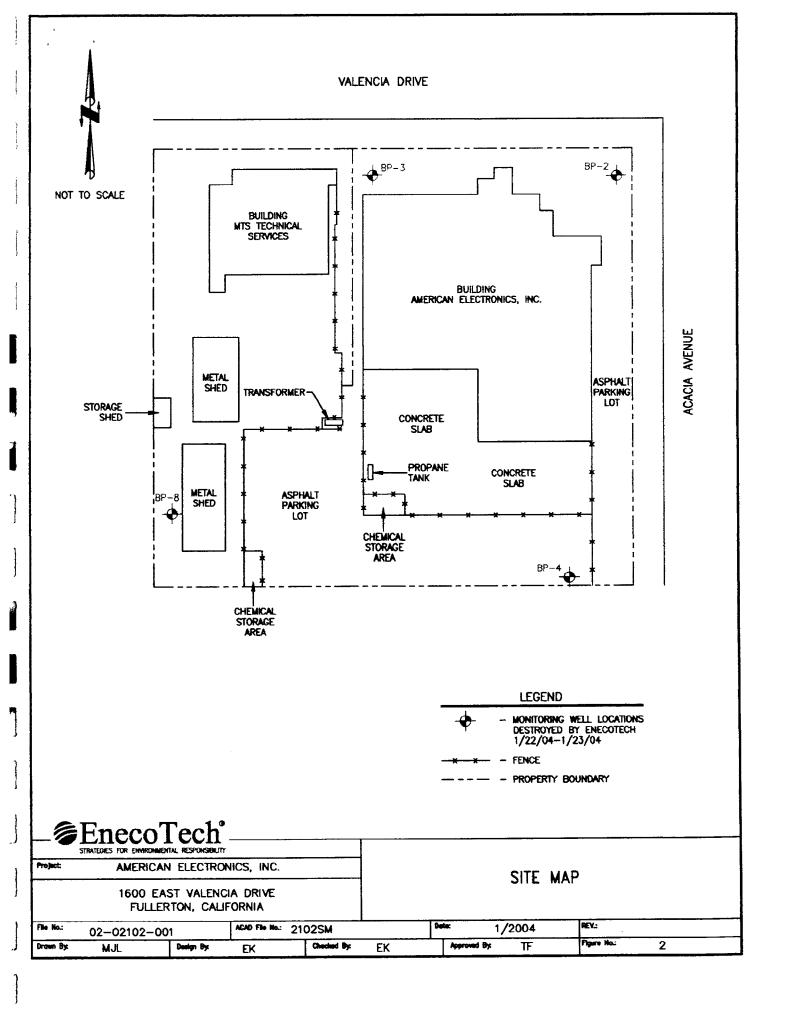


# **FIGURES**

Site Location Map Site Map FIGURE 1:

FIGURE 2:





## **APPENDIX A**

Well Destruction Permit



# **COUNTY OF ORANGE HEALTH CARE AGENCY**

### REGULATORY HEALTH SERVICES **ENVIRONMENTAL HEALTH**

JULIETTE A. POULSON, EN. MN DIRECTOR

MICE SPIRROEDA PROTOS Y NEW YNOTHER REGULATORY HEALTH SERVICES

STEVEN K. WONG, FIELD, LIPH DESCTOR ENTRONMENTAL HEALTH

MAILING ADDRESS: 2008 EAST EDINGER AVIONUE SANTA ANA, CA 82705-4720

TELETTONE: (714) 667-8600 FAX: (714) 667-8754 E-MAR: environment) © hos ou mange cause

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APPLICATION FOR WELL DESTRUCTION PERMIT

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our 111 West Ocean Blad Suite	900 6160 Fairmount Ave Suite A
Long Peach 90802 714-921-530	
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# DESTRUCTION OF MONITORING. WELLS AND SOIL BORINGS

All abandoned monitoring wells and soil borings shall be properly destroyed. A monitoring well is considered abandoned if it has not been used for one year.

- 1. Monitoring wells may be destroyed by the following methods:
  - Overdrilling the entire well, removing the well casing, filter pack, annular seal, and well box. The borehole shall then be filled with an approved sealing material.
  - Pressure grouting with an approved sealing material that flows through the perforations. This method is acceptable if there is no possibility of cross-contamination occurring between different zones. The casing may need to be ripped or punctured to ensure sealing material penetrates the filter pack and all other voids. The top five feet of the well and the well box shall be removed.
  - If the site is to be excavated, the monitoring wells may be excavated, the casing pulled, and any voids filled with sealant.
- 2. Soil borings are to be destroyed by filling borehole with an approved sealing material.
- Approved sealing materials are:
  - Bentonite
  - Bentonite grout
  - Bentonite-cement
  - Neat cement
  - Sand cement grout
  - Concrete

# APPENDIX B

Health and Safety Plan

# SITE SAFETY PLAN 1600 East Valencia Drive Fullerton, CA Project # 02-02102-001

### 1.0 INTRODUCTION

### 1.1 Purpose

The site-specific safety plan establishes procedures required for maintaining the health and safety of all persons in and around the site during activities. The site safety plan contains safety information in accordance with Title 29 CFR 1910.120(e) for hazardous waste operations and emergency responses.

### 1.2 Scope of Work

No threat to health and safety is expected to occur during the planned site assessment activities. This site safety plan has been prepared to: 1) identify potential hazards; 2) outline safety procedures to reduce potential injury or overexposure; and, 3) outline action required in case of health and safety threat.

The scope of work will consist of abandoning four monitoring wells to depths of approximately 70 feet below ground surface. Scope of work may change as field conditions change or as agreed to by involved parties.

### 2.0 EMERGENCY RESPONSE PLAN

### 2.1 Medical Care

Any person requiring medical assistance will be taken to the designated hospital for prompt attention. There will be a first aid kit available on-site while workers performing site assessment activities are in and around the work area.

### 2.2. Emergency Response Procedures

Depending upon the particular emergency, response procedures include contacting the local police, fire department, ambulance, and hospital. In the event of life threatening injury, first aid/CPR procedures should be started while the emergency teams are notified. Emergency Phone #911.

### 2.3 Evacuation Routes and Procedures

In the event of evacuation, there will be a pre-arranged staging area for personnel to meet. The staging area will always be upwind of contaminants. Wind direction will be monitored with a plastic scarf. Evacuation routes include any direction on city streets.





### 2.4 Hospitals

The nearest hospital is:

Name:

Anaheim Memorial Hospital

Address:

1111 W. La Palma Avenue, Anaheim, CA

Contact:

Emergency Room/Ask for a nurse

Phone #:

(714) 774-1450

A map showing the route to the hospital is attached.

### 3.0 <u>SITE/HAZARD CHARACTERIZATION</u>

3.1 Materials of concern - Chemical exposure to aromatic hydrocarbons: benzene,

toluene, ethylbenzene, and xylenes(BTEX) and chlorinated solvents Tetrachloroethylene (PCE), Trichloroethylene

(TCE) and vinyl chloride.

3.2 Affected area - Immediately near the borings.

3.3 Topography - There will be a paved parking lot, sidewalk, and street.

3.4 Physical Hazards - These hazards include slips, trips, and falls,

and Associated Risk

Hazards

sharp and heavy objects, uneven ground, potential heat stress, lifting hazards, dust, and noise, as well as risks that could include the use of first aid/CPR procedures. BTEX presents respiratory, dermal, and ingestion hazards that

could rely on first aid and immediate medical attention.

3.5 Fire and Explosion - Potential ignition of flammables due to oxygen enrichment

within the borehole.





### 4.0 TOXICOLOGY/REGULATORY COMPLIANCE

Toxicology data regarding Site Hazards

Chemical	STEL	TLV/TWA	IDLH
Benzene	5 ppm	0.5 ppm	500 ppm
Toluene	300 ppm	50 ppm	500 ppm
Ethylbenzene	100 ppm	100 ppm	800 ppm
Xylenes	150 ppm	100 ppm	900 ppm
Tetrachloroethylene	100 ppm	25 ppm	150 ppm
Trichloroethylene	100 ppm	50 ppm	1,000 ppm
Vinyl Chloride	Not determined	5 ppm	Not determined

STEL Short Term Exposure Limit: a 15-minute time-weighted average that should not be exceeded at any time during a workday (National Institute for Occupational Safety and Health).

Effects of overexposure due to inhalation, ingestion, skin or eye contact may initially include: Eye irritation, tearing or blurring of vision; non-specific discomfort, such as nausea, headache, or weakness. All have the potential health effects of causing central nervous system depression, decreased alertness, sleepiness, loss of consciousness, and defatting dermatitis due to skin contact. Benzene suppresses bone marrow function, causing blood changes. Chronic exposure can cause leukemia. Because there is a potential for benzene exposure with other aromatic hydrocarbons during vaporization, benzene related health effects should be considered when exposure to any of these agents is suspected.

### 5.0 SITE CONTROL

### 5.1 On-Site Control

Barricades with caution tape will be used to control unauthorized access into the work area. There will not be a security guard or additional off-site control. Site control will continue as long as there are personnel working.

### 5.2 Communication

Due to the close proximity of all field crew members, the necessity for radio communication is alleviated. The following standard hand signals will be used if oral communications fail:

Hand gripping throat	Out of air, can't breathe
Grip partner's wrist or	





TLV Threshold Limit Values: an 8-hour time-weighted average to which workers may be repeatedly exposed (American Conference of Governmental Industrial Hygienists).

IDLH Immediately Dangerous to Life or Health; maximum concentration from which one could escape a scene in 30 minutes without suffering irreversible health effects (National Institute for Occupational Safety and Health.

Both hands around waist	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	OK, I am all right, I understand
Thumbs down	No, negative

### 5.3 Buddy System

As a protective measure the buddy system will be used when two persons are on-site. Person on-site should keep watch on one another to provide quick aid if needed.

### 6.0 MONITORING PROGRAM

To identify the concentrations of aromatic hydrocarbons, a photo-ionization detector (PID) will be used for background readings, screening of soil samples, and periodic monitoring to assure that proper protective equipment is being used. If free product is discovered, work must stop and the field team leader must be notified.

### 7.0 WORKER PROTECTION PROGRAM

### 7.1 Responsibility

It is the responsibility of each contractor working on this site to provide its employees with the appropriate health and safety training. On sites where hazardous materials may be encountered, this training should consist of that outlined under Section 9.0 in this plan. EnecoTech requires that the employees of the contractors working on-site have this training and appropriate refresher courses. Each employer will supply their employees with the required safety equipment. EnecoTech personnel will monitor the site for hazardous conditions and recommend appropriate protective action when deemed necessary. Because EnecoTech is not an employer of the contractors, it is the responsibility of each contractor to respond to the recommendations for action based on EnecoTech's monitoring results. EnecoTech may, if conditions dictate, terminate operations for purposes of maintaining the health and safety of all personnel on-site.

### 7.2 Respiratory Protection

All personnel will need to have available a 2 face respirator that is NIOSH and MSHA approved for volatile organic chemicals (i.e. BTEX - Aromatic Hydrocarbons) when the quantity of Benzene is unknown. O.S.H.A. regulations stipulate employees will don a respirator when monitoring results indicate contamination levels of 5.0 ppm TWA. Work will only resume when the cause of increased levels are known, the project team leader is notified, and hazardous conditions are assessed. Upgrading of personal protective equipment will become mandatory as needed. To alleviate potential exposure, personnel not directly involved with the augering will stand upwind of any volatile organics.

### 7.3 Hearing Protection

Hearing protection will be used when required while persons are on-site.





### 7.4 Eye Protection

All safety glasses/goggles must meet OSHA/ANSI Standards 287.1. If a potential for liquid chemical exposure exists, splash guard protection shall be worn to prevent dermal and eye contact.

### 7.5 Clothing

Under non-hazardous contact, personnel will need to wear long pants, long sleeved shirts, and minimum 6-inch high work boots.

### 7.6 Facial

To properly wear a negative pressure respirator, personnel will need to be clean shaven. Mustaches should not extend below the corners of the upper lip. If any person/persons are unshaven, they cannot don any respirator.

### 7.7 Record Keeping

Each company will keep individual records for their employees. EnecoTech will keep monitoring records for all background, area, and soil samples. These results can be viewed by any and all personnel on-site.

### 8.0 PERSONAL HYGIENE

To eliminate the risk of ingesting contaminants, all personnel should wash their hands prior to eating lunch or snacks throughout the day.

### 9.0 TRAINING

Contractors will only provide employees that have had appropriate training. Employers should have records available, if needed, to verify that on-site employees have received the minimum equivalent of 40 hours training for work at hazardous waste sites as specified in the OSHA Hazardous Waste Operations and Emergency Response Standard (Title 29 CFR 1910.120(e)).

### 10.0 MEDICAL EVALUATIONS

EnecoTech employees need to have had a pre-placement exam to determine individual health status before working in areas that may require a respirator. A pulmonary function examination must be available before employees are required to use respiratory protection devices.

### 11.0 <u>DECONTAMINATION PROCEDURES</u>

### 11.1 Prevention of Contamination





Contamination prevention should always be kept in mind while working. Work practices that minimize contact with contaminants will be observed. Contact with contamination may occur from soil samples and items with which they are handled. To prevent contamination while handling soil sampling equipment, disposable gloves should be worn if possible.

Contaminants can potentially permeate ones clothing and, if not removed or detected, prolonged exposure can occur. Each individual needs to be aware of factors that affect the extent of permeation.

- Contact time
- Concentration (High --> Low)
- Temperature
- Molecular Size and Pore Space
- Physical State (gas, liquid, solid)
- Persistence

### 11.2 Methods

On-site decontamination procedures will include washing with water and soap solutions to clean the skin and clothing when there is contact with contaminants. Any equipment used on-site will be decontaminated before leaving the site.

### 12.0 TRANSPORTATION AND DISPOSAL OF WASTE MATERIAL

Material not used for backfilling purposes will be properly labeled and stored on-site until the level of contamination can be characterized. When characterization is complete, waste materials will be properly routed to the most appropriate location. Significantly contaminated soil will be properly disposed of off-site or remediated on-site with the necessary permits and equipment. When transportation and treatment occurs, a new Site Safety and Health Plan will be developed or this plan will be modified.





### 13.0 ON-SITE ORGANIZATION AND COORDINATION

The following signators have reviewed the site safety plan and are aware of its contents. A safety meeting was conducted with all involved parties. All issues set forth in the site safety plan have been discussed prior to starting work.

COMPANY NAME	SIGNATURE	PRINT NAME	DATE
EnecoTech Southwest  Site Safety Officer  Daja Exploration  Baya EX  Paga EX	Yalkel Duly	Edward Kontos Marcellarate	1/22/04
Bayo EX	Jam ayun	April Physics	1/22/04
Baget EX	Coleff	David B. HOGAN	1220-1
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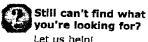
Your Destination: Anaheim Memorial Hospital 1111 W La Palma Ave Anaheim, CA 92801 714-774-1450

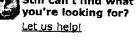
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- Driving Directions





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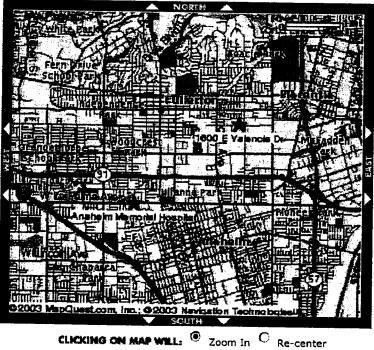
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3: Merge onto CA-91 W toward LOS ANGELES.	0.50 miles
4: Take the LEMON ST exit toward ANAHEIM BLVD/HARBOR BLVD.	0.27 miles
5: Turn LEFT onto N LEMON ST.	0.50 miles
6: Turn RIGHT onto W LA PALMA AVE.	0.73 miles

### Get It Done

- Format for Printing
- E-mail to a Friend

- Get Reverse Directions
- Get Directions Starting From This Business

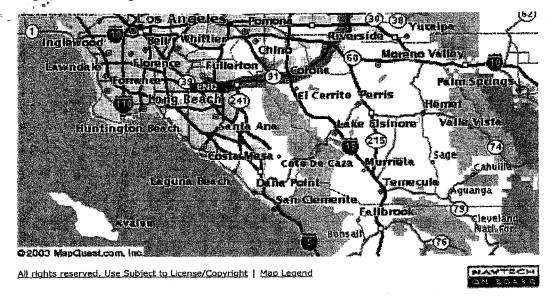


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Street Address\*

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